

EXHIBIT 326

**RULE 26 EXPERT WITNESS REPORT AND DECLARATION OF
DR. JONATHAN P. WINICKOFF, MD, MPH**

PERTAINS TO WAVE 1 BELLWETHER

San Francisco Unified School District

v.

JUUL Labs, Inc., et al

No. 3:19-cv-08177

HIGHLY CONFIDENTIAL

**In re: Juul Labs, Inc. Marketing, Sales
Practices & Products Liability Litigation**

MDL No. 3:19-md-02913-WHO (N.D. CA)

January 28, 2022



Jonathan P. Winickoff, MD, MPH

4) The strategies that can and should be implemented at the community level in SFUSD include, as set forth above: 1. Pharmacologic Treatment for Those Who Are Using Tobacco Products. 2. Clinical Education and Training in the Affected Community. 3. Efficient and Sustainable Clinical Screening and Tracking Systems. 4. Expansion of Treatment and Services. (including 4a. Expand Access to Existing Programs, and 4b. Creation of Specialized Treatment Capacity). 5. Routine Screening in School for Nicotine Use and Referral for Treatment. 6. School-Based Prevention and Treatment Curricula 7. Resources to Monitor, Detect and Deter E-Cigarette Use in Schools. 8. Local Community Outreach within Counties, Cities, and Towns. 9. Rapid-Cycle Monitoring 10. Adaptation to Create Tailored Treatment Strategies. 11. Ongoing Coordination, Evaluation, and Sharing Best Practices Among Communities and Tobacco Control Partners. 12. Employment of Best-Practice Policy and Enforcement Strategies. 13. Advertising and Social Media Tobacco Prevention and Treatment Campaigns. In reaching these conclusions, I incorporate by reference and rely upon the analyses, facts and data, conclusions and opinions disclosed in my September 20, 2021 report pertaining to School District cases.

III. OPINIONS

My patients are often not aware of the massive nicotine content in a single JUUL pod, do not understand the dangers of nicotine, nor do they understand the consequences of the steep pharmacokinetic increase in blood nicotine concentration

IV. PROGRAMS AND SERVICES NEEDED FOR ABATEMENT IN SFUSD

Effective Evidence-Based Strategies Can be Used to Abate the Youth E-Cigarette Epidemic and Associated Harms

Despite the substantial and significant harms associated with nicotine use, including through vaping as outlined above, there is widespread consensus that this epidemic can be abated. In particular, there is consensus in both the clinical and public health communities that the abatement measures identified in this report are effective in creating a steep and sustained downward trajectory of youth nicotine use and addiction. (CDC 2014, SG 2016, SG 2012, SG 2020) This plan follows well-established consensus on evidence-based strategies for prevention and treatment of tobacco product addiction. (Surgeon General Reports 2012, 2016, 2020, CDC report 2014; Walley SC et al 2019). Indeed, there is now a robust set of evidence-based interventions to address harms caused by nicotine addiction. (CDC 2014 Executive Summary)

Consistent with the *2012 Surgeon General Report on Preventing Tobacco Use Among Youths*, the *2014 CDC report on Best Practices for Comprehensive Tobacco Control Programs*, the *2016 Surgeon General Report on E-Cigarette Use Among Youth and Young Adults*, the *2018 Surgeon General Advisory on E-cigarettes and Youth*, and the *2020 Surgeon General Report on Smoking Cessation*, the remedies proposed in this document will help: (i) ensure that more youth in SFUSD avoid tobacco product addiction (ii) provide enhanced screening in multiple settings to find the youth who are currently using

tobacco products (iii) provide treatment strategies for those already addicted, and (iv) provide SFUSD with additional resources to deter and prevent youth use of tobacco products. In so doing, these remedies are designed to create a steep and sustained downward trajectory of youth use of tobacco products, nicotine addiction in SFUSD youth, and thus the associated harms to SFUSD by substantially undoing the steep increase in youth nicotine addiction and the established youth nicotine use culture that JUUL caused. Furthermore, consistent with these reports, the remedies and strategies outlined in this document must be comprehensive and require long-term investments in order to most effectively address the harms caused by the youth e-cigarette epidemic.

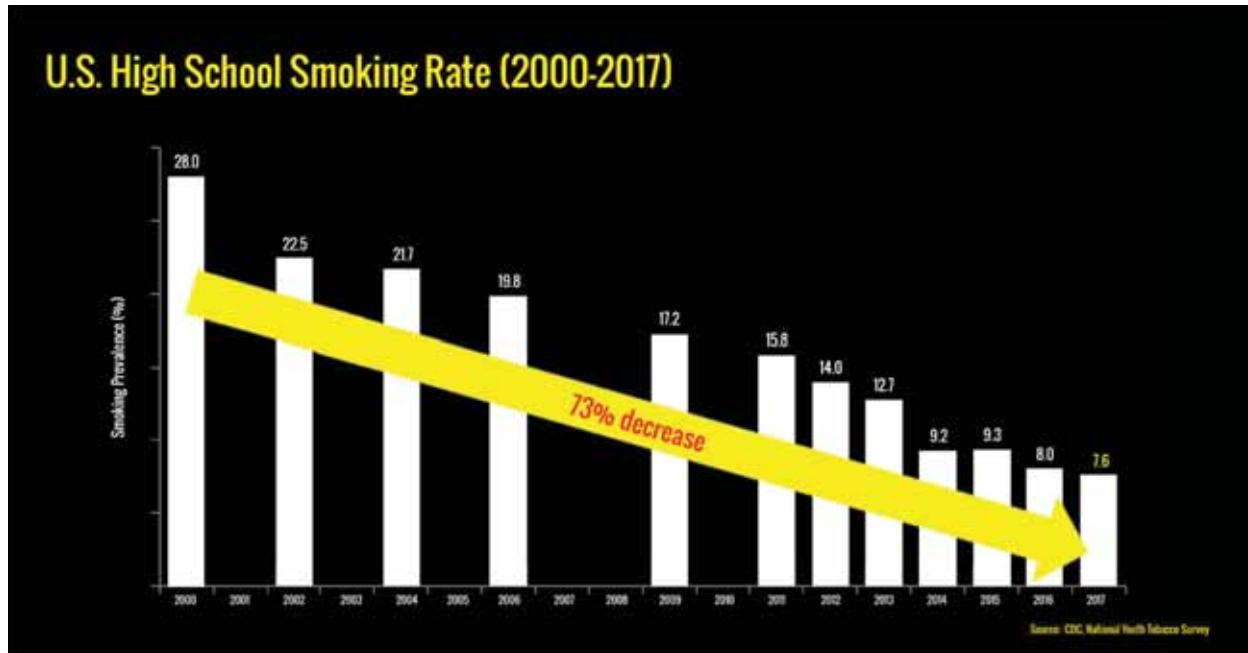
See, e.g. Executive Summary, 2014 CDC report on Best Practices for Comprehensive Tobacco Control Programs (noting that “[i]mplementing comprehensive” programs “would have a substantial impact” and that “[l]ong-term investments would have even greater effects.”).

Because vaping use by youth is at its core use of nicotine, these well-established strategies for addressing nicotine dependence are applicable to the harms caused by the recent surge in vaping use and abuse. (SG 2016) Indeed, Strategy 1A in the 2016 Surgeon General Report on *E-Cigarette Use Among Youth and Young Adults*, recommends using policies and programs that work for combustible cigarettes to address the e-cigarette problem in youth and young adults. (SG 2016) Nicotine dependence is characterized as a chronic, relapsing disorder that benefits from long-term management

and intensive treatment approaches. (SG 2020) In treating nicotine dependence the following have been shown to be true: 1. Any level of treatment is beneficial, and more intensive and longer behavioral and pharmacological treatment is generally better. 2. Any healthcare professional can treat nicotine dependence and the various settings in which such professionals work represent appropriate venues for providing these services. And 3. Behavioral interventions and FDA approved pharmacotherapies are effective for treating nicotine dependence. A combination of behavioral interventions and pharmacotherapy is the optimal treatment based on overwhelming scientific evidence, with superiority in efficacy over either intervention alone. (SG 2020)

After the 1998 Master Settlement Agreement with the tobacco industry, there followed a steep decline in the youth smoking rate, well captured in the below graphic. (NYTS 2000-2017; Truth Initiative 2018) Note that over the next 18 years, the high school smoking rate dropped from 28.0% in 2000 to 7.6% in 2017. The level of high school smoking in 2000 is very close to the level of high school e-cigarette use of 27.6% in 2019 when JUUL had a 75% market share. Before JUUL came on the market in 2014, the e-cigarette use rate among school age students was approximately 9%, with over 75% of those using less than 10 days per month. (NYTS 2014 survey) The epidemic of e-cigarette use caused by JUUL led to critical changes in both the prevalence of current use (% of youth who currently use tobacco products) and the frequency of use (how often current users need to use their product). (NYTS data 2014 to 2020) For school age

users, the odds of being in the 20+ days per month use category nearly tripled in the time before JUUL in 2014 to 2020. (Analysis of NYTS data) Therefore, in order for the level of youth who use 20+ days per month to get to the pre-JUUL 2014 level, the overall prevalence of youth e-cigarette use would have to fall to below 4%. (NYTS data 2014-2020) With the decrease in cigarette smoking rates in the 17 years after the MSA as a timing guide, it is therefore reasonable and conservative to conceive of the abatement plan as needing to last 15 years in order to have the best possible chance of bringing the youth e-cigarette rate down to a consistent and low single digit level. (see the above section on **The Youth E-Cigarette Epidemic**, report of Dr. David Cutler, and report of Dr. Steven Kelder for additional discussion on the non-linear nature of prevalence decreases). JLI's own internal documents discuss the need to take aggressive and comprehensive steps to abate the problem JLI created and suggest a goal of bringing the high school e-cigarette use rate down to 2%, the low single digits. (Harter Dep., Ex. 355)



As a steep and sustained downward trajectory of youth nicotine addiction is achieved, so also will a steep and sustained downward trajectory be achieved in the harms to communities like SFUSD impacted by youth e-cigarette use. The CDC has stated that “research has shown greater effectiveness with multicomponent interventional efforts that integrate the implementation of programmatic and policy initiatives to influence social norms, systems, and networks.” (CDC 2014b, Executive Summary)

But while a multi-pronged attack at different levels of the community is effective in combatting the epidemic, so too is a centralized one. Successful remedies at the community level will be enhanced, where practical, by coordinated efforts between clinical health settings and schools, which are critical entities that interface directly with youth and maintain responsibility for their mental and physical health as well as their

health education. In these contexts, expansion of prevention, screening, and addiction treatment capacity will be necessary. Public health departments at the local government level in SFUSD are in a good position to work with schools and other local stakeholders to encourage other community-based strategies. Continued expansion and creation of new partnerships in the community between local governments and schools, where feasible, will only increase the effectiveness and efficacy of these strategies. And continued expansion and creation of new partnerships with other local stakeholders providing community services to the youth population will also increase the effectiveness of these strategies. (SG 2016, CDC 2014)

A comprehensive abatement plan to address the harms created by the youth vaping epidemic in SFUSD requires the expansion, improvement, and creation of the programs and services identified herein, as well as additional programs and services related to the prevention and treatment of harms associated with youth vaping use and addiction including, for example, directly treating, evaluating, and addressing youth who are addicted to nicotine and vapor products.

Importantly, no single strategy identified below can fully reverse the harms associated with youth e-cigarette use. There are no magic bullets. But the strategies below can and may interact with one another in a complementary fashion, and together they are the most effective way to address the serious harms caused by the youth e-cigarette epidemic. Again, as the CDC indicates, evidenced-based programs "that are

comprehensive, sustained, and accountable" are the best ways to address a public health crisis and in particular one related to the use of nicotine products. (CDC 2014) Each of the strategies I identify below as part of an effective abatement plan in SFUSD is consistent with the evidenced-based programs identified by the CDC. Specifically, I have mapped each of the strategies listed below to one or more of the CDC's five Components of a Comprehensive Tobacco Control Program, as identified in its Best Practices for Comprehensive Tobacco Control Programs (2014).

The strategies proposed below are also from my perspective as practicing pediatrician treating youth with nicotine addiction. I understand the expert report of Dr. Steven Kelder focuses on abatement strategies that are focused on prevention. While there is inevitably some overlap, my focus of these strategies is from a treatment perspective.

1. Strategy 1. Pharmacologic treatment for those who are using tobacco products.

As explained in my September report, there is overwhelming evidence that FDA approved medications are effective in treating tobacco product dependence. (SG 2020, Ch 6) There are three main categories of treatments for nicotine dependence, slow release nicotine replacement therapy (NRT), bupropion, and varenicline. Slow release nicotine replacement therapy which is usually used as a patch, gum, or lozenge is the initial choice for most people who are not able to quit their products because it offers a

steady, non-addictive dose of nicotine that releases over time. The patch provides a constant low level of nicotine to handle the baseline level of nicotine that the brain needs, whereas the gum and lozenge are added on for breakthrough cravings. Dual use of nicotine patch plus gum or lozenge has been shown to work better than any single product alone. (Fiore et al 2008, SG 2020 and --Cahill et al 2013, Stead et al 2012, Lindson et al 2019 all in SG 2020, Ch 6) NRT has been recommended for use by youth and young adults. (SG 2020, AAP 2021, Moolchan et. al. 2005) The recommended duration of treatment for current tobacco product users is 12 weeks of gum plus patch and because the cessation rate is at least three-fold higher for combination therapy over trying to quit cold turkey, it should be offered to all current tobacco product users. (SG 2020, Ch 6)

Varenicline is a pill that has been shown to greatly increase the chances of tobacco cessation. (SG 2020, Ch 6) It may be combined with NRT to enhance its effectiveness. (SG 2020, Ch 6) It may also be combined with Bupropion to increase its effectiveness. (SG 2020, Ch 6) It is recommended for at least 12 weeks plus another 12 weeks if needed (6 months total). (SG 2020, Ch 6) However, varenicline is not recommended for youth under the age of 16.

Bupropion is a pill that has been shown to increase the chances of tobacco cessation in those over the age of 18. (SG 2020, Ch 6) It can be combined with NRT to enhance cessation further. (Ebbert et al 2010; SG 2020 Ch 6) Bupropion is also an anti-

depressant and while its use is not limited to treating depression, it may be a particularly good choice for patients who suffer from both nicotine dependence and depression or anxiety. (SG 2020, Ch 6) The recommended duration of treatment for initial tobacco cessation is 12 weeks, however, it can be continued for up to one year to help prevent relapse. (Hays et al 2001; SG 2020 Ch 6)

Quit rates vary across these different medication options but for the sake of costing out this first strategy, a very conservative estimate would be that not more than 25% of tobacco product users offered medication will quit long-term with the first medication they try. Subsequent courses of medications used in differing combinations should be employed to boost success rates because most people who ultimately quit will have tried several times before achieving success. (SG 2020)

For the purposes of calculating the numbers of youth who will use medication to quit, all those who currently use e-cigarettes or transitioned to other forms of tobacco through e-cigarettes should be offered medication. (SG 2020) Based on my own prior research and clinical experience, in offering medication treatment to thousands of youth and young adults who use tobacco products, well over half will accept free medication to help them quit. (Winickoff et al 2001; Winickoff et al 2003a; Winickoff et al 2003b; Winickoff et al 2014; Nabi-Burza et al 2019)

In SFUSD there is currently no centralized program offering nicotine replacement therapy to addicted youth. However, based on my discussions with

SFUSD they are interested in adopting a strategy of partnering with an E-Cigarette Control Coordinating Center ("Coordinating Center" or "CC") whose personnel will, among other things, help connect each tobacco user to available clinical treatment using virtual visits with counselors and mental health professionals.

I have been and continue to be involved with Tobacco Control Coordinating Centers at MGH and through my role as the Director of Translational Research for the AAP Richmond Center. These Centers have supported screening youth and adults for tobacco use and providing behavioral and pharmacological support to help youth quit. Topics covered include screening for tobacco use, behavioral and pharmacologic cessation supports, and use of the EHR to identify and address tobacco use. Resources are developed through a series of meetings and a structured review process with local stakeholders, subject matter experts from the fields of medicine, public health and tobacco control, and reflect best practices in the fields of youth tobacco cessation and prevention. Resources for screening and treatment have been disseminated through national and state-level medical societies, public health organizations, non-profits focused on tobacco control, federal agencies, and individual health systems.

AAP Coordinating Center activities have included supporting AAP Chapters and local health departments in pursuing regulations and improved legislation via provision of data and resources, networking support, and assistance in preparing

educational tools for pediatricians and other clinicians to use to inform public and professional audiences.

The AAP Coordinating Center has supported the implementation of regulations and disseminating existing resources and developing new toolkits designed to assist multi-unit housing residents in quitting smoking and protecting nonsmoking family members and neighbors from harmful secondhand and thirdhand smoke.

The AAP Coordinating Center has worked with the AAP's 66 state/regional chapters to provide state-specific tobacco control information and resources, and to support tobacco control in a variety of areas. This work included the implementation of a webinar-based continuing medical education program in the Kentucky chapter, which served to bring clinical practice recommendations directly to providers in the state. The Coordinating Center has created state specific websites with information, resources and interactive training modules.

In North Carolina, I partnered with AAP members and two county-level Public Health departments to implement tobacco control programs. Many pediatric practices have been trained in the tobacco prevention curriculum and are being supported by their local health departments to encourage rapid dissemination and sustainability of this program. The program is collecting real-time data on tobacco services delivered to families in NC.

In Indiana, I partnered with Indiana AAP and Indiana state department of health to implement a tobacco control program. Last year, four pediatric practices were trained in a tobacco exposure prevention curriculum and are being supported by a local coordinator trained by the Coordinating Center team and based at Indiana AAP to encourage rapid dissemination and sustainability of this program. The program is collecting real-time data on tobacco services delivered to families in Indiana, with the approval from the state department of health to expand these efforts to additional locations. In line with my role as Director of Translational Research with the AAP Richmond Center, the programs serve to translate best practices into real world settings.

Collaborative partners in these initiatives include:

- AAFP, AMA, ACP
- CDC, OSH, FDA CTP
- AAP chapters (n=66)
- Cancer, Heart, Lung, Truth, CTFK, PAVE
- Coordinating center for tobacco control research across multiple academic

medical centers 2006-2021 (Dartmouth, MGH, University of Illinois,

Nationwide Childrens, Johns Hopkins, Mt Sinai, U Colorado, U Rochester,

Children's Hospital of Philadelphia, etc)

As described in more detail in the strategies below, the CC will be responsible for

(i) the administration, execution, and management for many of the strategies that are a

part of this abatement plan, and (ii) the surveillance and evaluation of many of the strategies as well. As such, the functions performed by the CC will map to both the CDC's Component III (Surveillance and Evaluation), and Component IV (Infrastructure, Administration, and Management).

The Coordinating Center will also help these counselors and mental health professionals with communicating information back to the local pediatric primary care clinicians that serve the community. (see Strategy 3 for more detail about communication back with the primary care office) In order to cost out this strategy, calculate the number of youth and young adults ages 12-25 who use tobacco products and multiply by the cost for each one of them to have an initial consultation with a tobacco addiction specialist capable of prescribing medications (MD). The initial consultation will initiate treatment and triage the tobacco product users to either: 1. a 12-session treatment course with a tobacco treatment specialist (TTS) who can handle basic tobacco addiction counseling including Motivational enhancement treatment and cognitive behavioral therapy (75% of referrals);(Stanton A, Grimshaw G. et al 2013) or 2. 12-session treatment course with a psychologist/tobacco treatment counselor (PhD level) who can handle mental health co-morbidities associated with tobacco addiction. (25% of referrals) Because initial medications may need adjustment, a second medication consultation should be budgeted per 12 session cycle. Not every current tobacco user in the age range will accept treatment every year. For the purposes of

making a conservative assumption, and in accordance with CDC treatment estimates, we assume that 13 percent of current tobacco users will use the program each year. (CDC 2014) Because the majority of those referred will not quit initially and many of those who do quit will relapse, we estimate a quit rate of 20% at one year. Because of this potential to relapse, we will need to budget conservatively for possible additional cycles of treatment for the tobacco product using population even if they have used it before. For students, clinical visits can be accomplished during free blocks or after school and may also be employed as a treatment component of alternative to suspension programs.

There are at least three important reasons why high school grads in the community need to be included in the treatment of tobacco use. 1. Recent grads form an older peer group for those currently in high school. Whether it be former varsity athletes, club members, or even older siblings of current students, those who came through the system before are some of the community members that current students emulate. When those former students use tobacco products, it sends an important signal to those who follow in their footsteps that tobacco use is normal, normalizing, and even something to be emulated. 2. In addition to negative social modeling and re-normalization of tobacco products that comes from continued use, quitting tobacco products among friend groups and in social networks is highly contagious. (Christakis et al NEJM 2008) These days, those who successfully quit tell powerful stories back to

their social networks through online contact and even when they may not be physically together. The online community of students and former students is exactly that, a rich social network of community members emanating from the shared experience of high school and family member continuities. In my practice, I see the phenomenon all the time of older siblings using a tobacco product that then puts all of the younger siblings at much higher risk of use themselves. Where older siblings are able to quit tobacco products, the younger siblings and their own friend groups are more protected. 3. Because of the increase in the sales age of tobacco products to 21, many adolescents obtain products from older friends who are of legal sales age. The thicker the market of those older friends who can legally obtain product, the greater the access of the seniors in high school and the greater the access of everyone else. The problem of enforcement becomes much easier when the numbers of users who have recently graduated high school decreases. Many fewer high school students have strong connections to those who are 5 or more years older because they never overlapped during high school. Protecting high school kids in these communities means helping to reduce tobacco use and treat former students.

For reasons articulated above, schools with the help of the Coordinating Center will therefore reach out to formerly graduated students to ensure that youth in the community under the age of 26 have access to the treatment programs administered

through the Coordinating Center. The Coordinating Center will work with additional partners in the community to reach former students in the under 26 year old age group.

Through school nursing personnel, the school will help students check into a portal that connects to the Coordinating Center. Through this portal, the student will take a simple survey about their tobacco use and will then be connected with the treating MD for the initial consultation. For those students under the age of 18, a parent will be present via Zoom for the initial consultation and to ensure consent. Because of the virtual nature of these consultations, the treating clinicians need not be physically in the school building. Initial MD consultations and follow-up 12-session treatment programs will also occur virtually and will use computer terminals when available or student cell phones when terminals are not available. I regularly see many of my own patients in this manner during the school day. Multiple courses of medications may be needed for tobacco product users during the 15-year time of the abatement plan. In acknowledging the fact that some tobacco users may not be able to ever come off of their tobacco treatment medications entirely during the 15-year period of the abatement plan, we will conservatively budget for two 12-week courses of NRT patch plus gum per tobacco user per program enrollment, as well as two 12-week courses of either varenicline or bupropion per tobacco user per program enrollment. Strategy 1 in this plan maps to the CDC's Component III of Evidence-Based Best Practices. Cessation Interventions. Medications, medication prescribing, and courses of program treatment

are discrete costs. Program coordination costs will be handled by the Coordinating Center. I understand that these Strategies are being costed in the reports of other experts including Dr. David Cutler.

2. Strategy 2. Clinical Education and Training in the Affected Community.

(SG 2016, SG 2020, CDC 2014)

For the purposes of this strategy, clinicians are defined as all healthcare professionals who deliver care to youth in the affected community, including but not limited to nurses, doctors, social workers, mental health providers, and medical assistants. Healthcare professionals may work in a variety of different community settings, including within schools in the case of school nurses, co-located clinics that are strongly affiliated with schools, work in health centers near schools, in local community colleges, in local community health centers, and in local pediatric and family practices. Working with the Coordinating Center, local communities will play a critical role in medical or academic detailing by helping to educate their local health system partners to ensure that all healthcare personnel at the city, county, or school district level are trained and ready to receive increased referrals for tobacco dependence care. Most communities have local clinical champions, liaisons with healthcare partners, and existing programs that will serve as a bridge to ensure that health care professionals practicing in the community are all trained to deliver appropriate tobacco dependence treatment.

Because education and training of the clinical work force should come before or along with comprehensive screening and treatment, it also creates early opportunities for how best to use this work force to create positive downward momentum of youth tobacco product use and nicotine addiction in their local communities outside of the clinical settings in which they practice. This education strategy therefore will address the range of opportunities that come with clinical education and training.

Therefore, this strategy involves developing and disseminating free continuing medical education programming for every pediatrician, family practitioner, nurse, medical assistant, social worker, and mental health provider in the community to ensure that the health care clinicians interfacing with youth in the community are trained and ready to help them. In particular, the following strategies would undoubtedly increase clinical education and training in the community, and counties, cities, and schools can play a key role in effectuating these strategies:

1. have core counseling content and treatment algorithms applicable to preventing tobacco product use and nicotine addiction, screening for current use, office counseling and treatment, and enrollment in treatment programs outside of the office. These services in the community will include an expansion of existing mental health programs to handle extra use by nicotine addicted youth (see Strategy 4 below);

2. have content on effective ways to engage with local middle schools, high schools, and higher educational institutions to help provide services to and support their efforts to prevent and treat tobacco product use in their students. When schools ask for clinician support for community-level prevention activities they will have a local workforce ready to meet the need;
3. have content specifically about helping to mentor community youth advocates and youth led initiatives to promote higher tobacco product pricing, tobacco free laws, and tobacco-free zones around schools;
4. have content on how to support and sustain community-wide tobacco control efforts such as improved enforcement of existing tobacco control regulations. Many clinicians sit on or know members of their local board of health and may have some direct authority to influence these local regulations;
5. Have content on how to engage with the local health departments to support their tobacco control efforts; and
6. have the tools and strategies to “inoculate” youth against the viral marketing and social media pressure that attract kids to use nicotine products as early as middle school. These education and training

approaches are a core part of comprehensive tobacco control programs.

(CDC 2014, Walley et al 2019)

The proposed trainings will be tailored for use in the school community by adapting existing materials and treatment information (and where such materials do not exist creating them) to serve the specific needs of the school community. (Liu J et al 2020) Once a training module is created with input from school and other community partners, it may be used over and over again to train a variety of clinician types with only minor adaptations for different settings and clinician types. Ancillary materials will include information for parents about youth tobacco product use, prevention and treatment strategies that can be disseminated through social media channels in each local health system, through schools, parent listserves and advocacy groups such as PAVE (Parents Against Vaping E-cigarettes) and through the departments of public health or equivalent structures in each community. These ancillary materials will be updated on a regular and on an as needed basis to make use of opportunities arising from emerging evidence-based interventions, new or emerging nicotine products that pose threats to adolescents in the county, or newly discovered public health threats such as EVALI (Electronic Cigarette and Vaping Associated Lung Injury) and COVID-19. The trainings will also include how to screen and identify which youth may need more comprehensive wrap around services to address co-occurring mental health and

other substance use disorders that could be best handled through specialized treatment.

(CDC 2014, SG 2020, SG 2016)

Funding will also be needed to develop and update the clinical education curriculum annually both for medical trainees and for all practicing clinicians in the community. These tasks will be performed by the Coordinating Center with the following FTE guidance. (2 FTE (1.0 FTE Nurse Educator and 1.0 FTE MD) for one year to create; 0.7 FTE (0.5 FTE Nurse Educator and 0.2 FTE MD) to update over time); coordinate, disseminate, and monitor its spread throughout local training programs, healthcare offices, and healthcare systems in the community. Based on my experience with quality improvement initiatives at Massachusetts General Hospital, 1 FTE academic detailer can usually cover no more than 100 clinicians per year. One1 FTE data analyst over time to monitor and track; provide for dedicated clinician time to support schools, youth advocates who will work for improved local policy regulations that have demonstrated effectiveness at lowering tobacco product use, community engagement activities such as online and in-person lectures (1FTE Nurse-clinician for every 5 schools in the community over time); (CPHSS 2014; IOM 2015). The clinical liaison for the schools will also help build community support for effective enforcement of existing tobacco control laws in the county and support for funding of comprehensive tobacco control programs at levels recommended by the CDC. (CDC 2014, SG 2016) Strategy 2 in this plan maps to the CDC's Component I. Community

Interventions which specifically mentions trainings and technical assistance on best practices for effective tobacco use prevention and cessation programs. These activities will be operationalized by the Coordinating Center.

3. Strategy 3. Efficient and Sustainable Clinical Screening and Tracking Systems.

Efficient and sustainable treatment of youth in the community will ultimately be enhanced by the electronic clinical communication of services received in Strategy 1 to the primary care doctors that serve each youth in the community. This strategy will be accomplished through the work of the Coordinating Center and will necessarily and first include simple communications back with the PCP (primary care provider) about the provision of medication and treatment through the above-described MD initial virtual consultation and subsequent 12-session treatment program. Over time, systems of care that communicate back with the primary care offices in a more automated fashion will be employed—the idea here is that treatment of affected youth cannot and will not wait until the ideal automated system is built. The basic treatment of youth will be deployed immediately to start getting youth the medications and treatment they need from day one.

Over time, automated connection back to the PCP office and to additional national tobacco control resources will be built into this electronic system. Strategy 3 acknowledges that in addition to the highly individualized care articulated above in

Strategy 1, other effective generic programs exist that have shown some activity in improving cessation rates and should also be accessible for youth in the community. More access to these adjunctive programs over time will help drive the smoking rate down faster. No one treatment strategy can fully abate the problem, nor meet the needs of every youth tobacco user at any given time. Peoples' treatment needs and preferences will change over a 15-year time horizon. By employing a variety of additional programmatic supports (such as quitlines; smokefree texting programs (*Smokefreetxt*; *This is Quitting*; *My life My Quit*; etc.) in combination with the individualized treatment program described in Strategy 1, along with automated communications about those treatments back to the tobacco user's own PCP, the abatement plan will optimize downward pressure on tobacco use rates in the community.

These systems have been built in other contexts and are therefore both technically feasible, economical, and practical. The system will improve the connection and follow-up with primary care and will also ensure that the standard of care for tobacco dependence treatment is followed uniformly across the community in whatever contexts they are employed over time.

In its full form, this system will integrate the routine screening for and tracking of tobacco product use through the electronic health record (EHR) which will also allow the offering of treatment and appropriate referrals to each youth in a routine and consistent manner at every clinical visit to their PCP. (Walley et al, AAP Policy on

Electronic Nicotine Delivery Systems 2015) Rates of screening and counseling for tobacco dependence will be much higher with this system coordinating through the EHR. (Nabi-Burza et al 2019; Tanski S et al 2003)

Clinical offices are moving away from paper medical records and improving clinical practice in this area means improving the electronic communications that will support the critical rolls of screening and counseling for youth tobacco product use. (SG 2020) Using routine and consistent screening protocols promotes fair and equitable tobacco treatment for people of different races in the community. (Dempsey J et al 2015) For the purposes of this Strategy 3, offices are defined as any place where youth receive their primary healthcare. This architecture can be built first for the dominant EHR system EPIC, and then can be adapted for all other EHR health systems. If other EHR systems are dominant in a particular community, those should be done first. Because each health system may use different versions of the same basic EHR systems, IT programmers will be needed to adapt and incorporate the general approach to each health system even if they use the "same" EHR. As treatments for nicotine dependence continue to improve over time, these innovations can be incorporated into the Clinical Screening and Tracking System on an annual and as needed basis. According to meta-analysis of the existing literature, having a routine tobacco product use status identification system in place more than triples the rate of clinical intervention with their patients who use tobacco products (OR 3.1 95% CI 2.2-4.2) (SG 2020). Even more

important, such a system doubles the chances that patients will quit tobacco products.

(SG 2020) In my own work with young adult parents, we showed over a ten-fold increase in tobacco control services delivered with these innovative EHR systems, including medication use and quitline referral. (Nabi-Burza et al 2019; Nabi-Burza et al 2020) The system yielded a 1.9% decrease in smoking rate among young adult parents each year the system operated. (Nabi-Burza et al 2019) The cost of this system was \$42 per year (95% CI \$36-\$52) per unique tobacco product user (Drouin O et al 2020) These tasks will be performed by the Coordinating Center with the following FTE guidance. Based on my prior implementation projects to deliver tobacco control, the IT programming work could be accomplished with 1 FTE IT programmer for each health system in the community for one year and then 0.5FTE IT programmer per year after that. (Nabi-Burza et al 2019; Drouin O et al 2021) Because the EHR improvements are centralized, one IT programmer can cover a number of clinical locations as long as they represent the same health system. For the purpose of this proposal we are budgeting \$42 per tobacco user per year for Strategy 3. Strategy 3 in this plan maps to the CDC's Component III. Cessation Interventions.

4. Strategy 4. Expansion of Treatment and Services.

a. Strategy 4a. Expand Access to Existing Programs.

The next strategy is to expand treatment and services in the community. The first part of this strategy is to support the continuation of, advertising for, enhanced access

to, and expansion of existing treatment programs including but not limited to the following evidence-based and evidence-informed options: **quitline counseling options**, **text-to-quit programs** such as *My life*, *My quit* and *This is Quitting* (Graham AL et al 2021; Graham AL et al 2020), **in-person programs** such as *N-O-T on Tobacco*, **on-line programs** such as *ASPIRE*, and **school-based counseling programs** (Liu et al Current Addiction Reports 2020 7:520-532). The costs of these programs may vary according to size of community served, level of intensity of personal counseling involved (personal texting vs. automated bot), and whether the state where the community resides already has an existing contract with the program.

For example, one of the most comprehensive youth counseling programs, *My life My quit* has existing contracts with the following 21 states: Colorado, Hawaii, Idaho, Illinois, Iowa, Kansas, Kentucky, Massachusetts, Michigan, Minnesota, Montana, Nevada, New Hampshire, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, Utah, Vermont, and Wyoming. (*My life my quit* 2021) For states not on this list, access to *My life My quit* can be purchased. As described in Strategy 3. Clinical Screening and Tracking, part of expanding access to these programs can come from building automated referral systems that cue off of electronic surveys. (Fiore M et al 2019) To optimize their effectiveness, access to these referral systems will be needed in the contexts in which youth may interact with healthcare professionals and mentors outside of a formal clinical relationship—such as through the school nurse, guidance, social

work, or through other youth-facing community-based organizations. Access to these additional referral systems may include personnel training to steer those who use tobacco products to the online locations where the surveys can be taken. These strategies will be highly tailored to the specific contexts in which they are deployed and the Coordinating Center will be involved with this personnel training and contracting for expanded access to these programs. Costs: 1. contracting with evidence-based national programs such as This is Quitting, My life My quit.2. Annual training of personnel to help youth access these programs in the additional contexts identified by the community such as YMCA, Boys and Girls Clubs, Community Colleges, and other youth facing community organizations. (Costs for this annual training are accounted for in Strategy 2) Strategy 4a in this plan maps to the CDC's Component I. Community Interventions which specifically mentions community trainings and technical assistance on best practices for effective tobacco use prevention and cessation programs. (See reports of Dr. David Cutler and Dr. Steven Kelder for costs associated with this Strategy)

b. Strategy 4b. Creation of Specialized Treatment Capacity.

The second part of this strategy is to support the creation of adequate treatment capacity and treatment center capacity for all youth who are nicotine addicted. This expanded capacity should include mental health professionals skilled at handling mood disorders, anxiety, self-harm and suicidal ideation, and other mental health conditions

created by or worsened by nicotine addiction. (SG 2020) This extra capacity is necessary because those with mental health issues have a harder time quitting tobacco product use. (Prochaska et. al. 2017) The additional treatment capacity should also be able to handle addictions that started with nicotine but have evolved into multiple product use addiction disorders. In effecting this strategy, it may be most efficient to partner with existing mental health clinicians and programs in the community, or to create dedicated programs affiliated with the schools and other community-based organizations through their existing partnerships. This treatment capacity can be met by using the virtual visit 12-session program detailed in Strategy 1.

In terms of estimating the extent of additional services required, a study of tobacco product users who called the largest quitline in the country demonstrated that 1 in 4 met criteria for current major depressive disorder. (Herbert et al 2011) Treating mood disorders such as depression with anti-depressive medications such as bupropion can help people quit tobacco products. (SG 2016, Ch 6) Using this 25% estimate as a guide, about 25% of current tobacco product users should also receive concurrent mental health services to ensure they get onto the medications and obtain the necessary specialized treatment. (SG 2020, Ch 6) Most of this capacity will be outpatient-based and can be delivered through virtual visits as articulated in Strategy 1.

In my clinical experience, the 12-week treatment programs will not serve the most challenged youth. Some severely addicted patients may need multiple courses of

in-patient treatment of two weeks or more. (Van der Meer et al 2013; Hall and Prochaska et al 2009) In my experience, inpatient and day programs for e-cigarette dependence and co-occurring mental illness will be an important part of 4% or 1 in 25 of those who are current daily users of e-cigarettes. (Winickoff JP clinical estimate) There is a critical shortage of inpatient and outpatient mental health and addiction treatment capacity for nicotine addicted youth in many communities. However, meeting this need is essential to maximizing a steep downward trajectory in tobacco product use among youth over time. The ability to meet this need will vary across communities, so including this highest level of treatment capacity in the abatement plan will be at the discretion of and ability to provide these services. For conservative budgeting purposes, 4% of tobacco users per year will need resources set aside for a 1-one week intensive day program or an inpatient program over and above the 12-session program to help them quit. A good benchmark for the cost of this program is \$4,800 based on the Residential Treatment Program and the Mayo Clinic's Nicotine Dependence Center. (https://mcforms.mayo.edu/mc2000-mc2099/mc2066-11.pdf?_ga=2.196119532.1345424146.1643223503-1705247062.1643223503.) Strategy 4b in this plan maps to the CDC's Component III. Cessation Interventions.

5. Strategy 5. Routine Screening in School for Nicotine Use and Referral for Treatment.

For the purposes of this strategy, schools are defined as all entities that educate youth in the age range of 12 to 25 years, including all public and private middle schools, high schools, community colleges, four-year colleges, tech and vocational schools in the community. Through a partnership with the Coordinating Center (see Strategy 10) and provision of funding to each school for surveys, students in the community will have twice per year screenings for intention to use nicotine, nicotine occasional use, and nicotine dependence. (SG 2016, SG 2020, CDC 2014) In addition, these surveys will assess where and how users are obtaining nicotine products, and specifically which products they use. This information will help to determine the current landscape of the problem in each community. The schools will track rates in these metrics with the help of the Coordinating Center by grade-level, and socio-demographics to identify those at highest risk for more intense interventions. (CDC 2014) The Coordinating Center will be able to track local community “hot spots” where tobacco product use may be higher than in other areas and these locations will become areas of focus for Strategies 8, 10, 12, and 13. Students will have the ability to ask for free help in quitting their nicotine addiction on these surveys which will trigger treatment services as articulated in Strategy 1. Through additional school nursing and administrative support time, the school will help students check into a portal that connects to the coordinating center.

Through this portal, the student will take a simple survey about their tobacco use and will then be connected with the treating MD for the initial consultation. For those students under the age of 18, a parent will be present via zoom for the initial consultation and to ensure consent. Because of the virtual nature of these consultations, the treating clinicians need not be physically in the school building. Initial MD consultations and follow-up 12-session treatment programs will also occur virtually and will use computer terminals when available or student cell phones when terminals are not available. The main purposes of these school surveys is to identify those who need treatment, facilitate treatment delivery, and monitor school and community level nicotine use prevalence trends over time. Funding for Strategy 5 will be costed out as part of 1. Provision and administration of the survey; 2. Resources to help navigate and link students to the virtual treatment services described in Strategy 1. Strategy 5 in this plan maps to the CDC's Component III. Cessation Interventions. These activities will be operationalized by the Coordinating Center.

6. Strategy 6. School-based Prevention and Treatment Curricula.

Facilitating the development of school-based curricula and disseminating educational and treatment content in the community is the next strategy. (Liu J et al 2020, Winickoff JP et al 2016, Kelder expert report 2021) Using local health teachers, school nurses, and local pediatricians as the trusted messengers in the community, this strategy serves to adapt and disseminate best available evidence-based curricula so that

every student gets counter advertising exposure (such as content created by *Truth*) and taught specifically how to resist initiating electronic and other tobacco products, how to serve as peer to peer helpers for friends who are currently addicted, and how to get help for those themselves who are currently addicted to these products. (Liu J et al 2020) School based curricula may be used as components in health class, but will also include staff time and training for school nurses, how to connect with local pediatric community champions, local treatment options, and how to refer every student who wants help to programs inside or outside the school. Specific programs will be geared toward treating students rather than suspending them from school and sports (alternative to suspension programs—Liu et al 2020). Additional staff and training curricula will also be provided to educators, parents, coaches, and athletic programs who supervise and mentor students in afterschool and community-based settings. (SG 2016, CDC 2014, see report of Dr. Steven Kelder for more detail) Strategy 6 in this plan maps to the CDC's Component I. Community Interventions. (See reports of Dr. David Cutler and Dr. Steven Kelder for costs associated with this Strategy)

7. Strategy 7. Resources to Monitor, Detect and Deter E-Cigarette Use in Schools.

Nicotine free air can help establish tobacco product use as outside of the social norm (CDC 2014, SG 2016), and should be the minimum expectation for learning environments. Thoughtful and systematic student supervision in school buildings and

elsewhere on middle school and high school campuses and on school buses is a highly effective means to supervise, deter, detect and intervene in situations involving student conduct that poses health and safety risks, including e-cigarette and tobacco product use. Comprehensive student supervision, deterrence and detection strategies are important to placing students into counseling, treatment or other services appropriate to their situation. Because youth spend a majority of their time at school, and travelling to and from on school buses, deterring, detecting and intervening in instances of e-cigarette use is a crucial component of any strategy to prevent and reduce youth use of these products. Effective supervision, detection and deterrence measures will reduce instances of youth being initiated to these products at school while also reducing opportunities for ever or current e-cigarette users to use these products in school and school-related environments. Reductions in e-cigarette use in school environments will likewise reduce youth initiation and addiction rates, while also reducing the disruptive effects of youth use to the school mission and environment.

Comprehensive student supervision, deterrence and detection involves both human and technology resources tailored to fit local school district-specific conditions. Educators need additional training in how to identify e-cigarette use in classrooms and elsewhere. (Allem, et al., *Drug Alcohol Depend.* 2018). Additionally, appropriate technology to reliably monitor, deter and detect e-cigarette use should be installed and maintained over time in a reliable functional state. Monitoring of school campuses via

security cameras is commonplace. For the 2017-2018 school year, the National Center for Education Statistics reported that 93.6%, 91.5% and 77.9%, respectively, of U.S. High Schools, Middle Schools and primary schools used security cameras to monitor school premises. (National Center for Education Statistics 2019) But equipment may need to be replaced, upgraded, augmented or deployed more widely because of the pervasiveness of e-cigarettes, the ease with which they can be concealed and the difficulty of detection. In a survey by Truth Initiative in January 2019 about how schools are responding to the youth e-cigarette epidemic, 41% of schools reported having installed additional security cameras near restrooms and 46% reported having installed cameras elsewhere in the schools. (Truth Initiative 2019) Technology to detect e-cigarette use should be installed in bathrooms, classrooms (Allem et al., *Drug Alcohol Depend.* 2018), elsewhere in school buildings, on grounds and in school buses, as appropriate based on an assessment of local conditions, to aid in deterring and detecting e-cigarette use, and some schools have already taken these steps. (Truth Initiative 2019) Ongoing remote centralized monitoring should be employed with an alert going to school administration when a violation is detected or a device has been tampered with. Where feasible based on an assessment of local conditions, every interior location where school administration suspects actual or likely vaping should be covered by appropriate monitoring technology. Additional student supervision technology including access control and

digital hall pass systems, which some schools already employ to try to deter instances of student e-cigarette use, should be utilized if appropriate to local conditions.

A variety of local conditions including building designs, information technology and other infrastructure, safety and security staffing, existing safety, security and student supervision and communication systems, and the locations of student e-cigarette use are some of the factors that will affect a determination of which specific resources are logical and effective choices for a particular school district and, in some cases, for a particular school. For these reasons, a determination of the appropriate level and mix of resources necessary in a particular school or school district will depend on a comprehensive assessment tailored to local conditions. Such assessments, including cost considerations, should be performed by appropriate professionals with expertise in school safety, security, climate and culture, and where appropriate, should also include input from professionals who can address related factors of school technical and/or physical infrastructure and architecture. Smokefree environments have been shown to de-normalize tobacco use and should be the common expectation for all learning environments. (SG 2020, SG 2016, SG 2012, CDC 2014). Strategy 7 in this plan maps to the CDC's Component I. Community Interventions. (See reports of Michael Dorn and Robert Rollo for specific recommendations and costs associated with this strategy).

8. Strategy 8. Local Community Outreach within Counties, Cities, and Towns.

Knowing that local communities may have important insights into equitable distribution of care for their own community members, this strategy will provide local resources for targeted outreach for underserved populations. Such activities may include but not be limited to community centers, YMCA's, Boys and Girls Clubs, and the local community events throughout the year that provide additional public health opportunities to address nicotine addiction in youth. Available resources for those affected by nicotine addiction need to be well advertised during these community events so that every person in the community knows how to help youth with their nicotine addiction. This strategy will be operationalized through a grant program to cities, towns, and community-based organizations. Based on my work running an advocacy program at Massachusetts General Hospital, grants of \$2000 will typically cover the time and expenses to support a booth, training, staffing, and follow-up at one community event. The program can be run effectively with one FTE administrator in each community who can award 15 local grants per year. (Winickoff JP 2021) Strategy 8 in this plan maps to the CDC's Component I. Community Interventions. These activities will be operationalized by the Coordinating Center.

9. Strategy 9. Rapid-Cycle Monitoring.

Rapid-cycle monitoring means frequently collecting and analyzing data and surveillance of tobacco control practices in order to assess the success of various aspects

of the abatement plan over time. (CDC 2014, SG 2016, SG 2020) This will include three components:

First, this will include conducting rapid-cycle monitoring to track and evaluate city and town-level tobacco product use and prevention strategies. In addition to analyzing the data collected from school-based surveys and clinical screening and tracking that has already been specified, additional city and town-based surveys of department of public health workers will help identify local outbreaks and opportunities for immediately responding to local trends in nicotine product use and industry activities.

With the shifting landscape created by the epidemic of adolescent nicotine product use, Strategy 9 also includes conducting ongoing surveillance of tobacco control policies across cities and towns to identify and keep current best practices to prevent youth access to nicotine products (including retail environment, point of sale, enforcement). (SG 2016)

Finally, there is a need to disseminate findings from this existing and ongoing monitoring to spread best practices throughout the community and across other communities through the Tobacco Control Coordinating Center. Effective strategies will be shared with state and local partners help protect youth in the community. (See also Strategy 11) Particular attention will be paid to sharing best practices with contiguous communities and counties, creating a zone of wellness around the index community.

Such a strategy was used effectively during the early spread of the Tobacco 21 initiative. (Reynolds et al 2021, Reynolds et al 2020) Funding for surveying entities outside of the schools and reporting that data back to the Coordinating Center is projected at 1 FTE Project Coordinator per Community per year. Funding for data analysis and reporting of this Strategy is included in Strategy 11. Strategy 9 in this plan maps to the CDC's Component IV. Surveillance and Evaluation. These activities will be operationalized by the Coordinating Center.

10. Strategy 10. Adaptation to Create Tailored Treatment Strategies.

Another strategy is to accelerate the development of improved treatment strategies and programs for youth who are current users of nicotine products in the community. Existing peer-reviewed evidence-based programs will be adapted to help underserved and special populations of youth in the community to quit tobacco product addiction. Funds will be used to hold focus groups twice per year for underserved minority or special at-risk groups identified by the plaintiffs in order to develop improvements, study, and disseminate best practice treatments for those individuals in these special populations who are now addicted to nicotine products. These tasks will be performed by the Coordinating Center with the following FTE guidance: One FTE program coordinator, titled the "equity champion" will arrange the focus groups and help code the qualitative data and 0.4 FTE qualitative research methodologist will oversee the data collection and reporting process. Findings will be

incorporated into the tailored educational trainings for the communities served (Strategy 2). This data will also be shared through the Coordinating Center (Strategy 11) in order to help inform needs of other specialized populations. Strategy 10 in this plan maps to the CDC's Component I. Community Interventions.

11. Strategy 11. Ongoing Coordination, Evaluation, and Sharing Best Practices

Among Communities and Tobacco Control Partners.

Strategy 11 is to refine a community-wide action plan in conjunction with all stakeholders in the community along with the American Academy of Pediatrics, School Nurses Association, American Academy of Family Physicians, American Dental Association, and other youth-focused health groups that will include tracking of community specific data, programmatic spread, availability and use of the treatment of youth for nicotine addiction in the community, and benchmarking of success across communities. One component of Strategy 11 is to promote information sharing between youth-focused health groups to maximize collaboration in service of reducing the youth initiation rate of nicotine products to as close to zero as possible. The Coordinating Center, working with national and local tobacco control partners, will be in the best position to survey and leverage the network of child healthcare clinicians and affiliated health groups to promote promising and effective treatments. One of the great advantages to partnering with the Coordinating Center is that experts within the Center can use proven and efficient distance training strategies with clinicians and health

centers in the local community, tapping into the best expertise in the country for spreading youth tobacco control screening and treatment to each locality. (Hipple B et al 2013, Nabi-Burza E et al 2019) The Tobacco Consortium of the American Academy of Pediatrics may be in an excellent position to help coordinate and bring together the following national stakeholders: State Medical Societies, CDC, AAFP, ADA, ACS, ALA, AHA, NIDA, Smokefree Text Providers such as NCI, National Jewish Hospital in Denver, and Truth.

The Coordinating Center will help serve as the link to national quitline, texting, and online programming immediately and on an ongoing basis as new and effective interventions are developed. The inclusion of this wider lens will inform and promote state-of-the-art tobacco control practices at the community level. The Coordinating Center will help ensure that best practices are followed for each of the articulated abatement plan strategies. The Coordinating Center will also enhance efficiency of the community abatement plan, helping to ensure that community-relevant content and approaches are adapted rather than having to create them from scratch. (SG 2016; CDC 2014) This abatement strategy will be covered by the overhead at levels articulated by the CDC with the following FTE guidance: one FTE data analyst at the coordinating center, one FTE administrative support person, and 0.5 FTE implementation scientist each year. Strategy 11 in this plan maps to the CDC's Component IV. Surveillance and

Evaluation and V. Infrastructure Administration, and will be operationalized through the Coordinating Center.

12. Strategy 12. Employment of Best-Practice Policy and Enforcement

Strategies.

Not every community will have the legal or regulatory authority to control all of the evidence-based effective tobacco control strategies that affect the trajectory of youth tobacco product use in their communities. However, to the extent allowed by local, state, and federal laws, evidence-based priorities should include enforcement of existing regulations with a minimum of 4 compliance checks each year per retailer. (Winickoff et al 2018) In the community, enforcement often occurs at the local level with violations reported to the local board of health. A typical compliance check would be performed by a 20-year old who attempts to purchase a tobacco product from a retailer. If the sale is made to the under-age person then the retailer would suffer the consequences as delineated by relevant regulations at the city, county, and state levels. Ensure fines and license revocations are applied to the extent allowed by law for point-of-sale violation of regulations including advertising, and flavor ban violations. This strategy includes monitoring and reporting on compliance violations with existing in-person checks, as well as clean local and state clean indoor air laws, regulations, and ordinances. Expand enforcement activities to include on-line age verifications as well as compliance with delivery laws of tobacco products to addresses within the community. Enforce all

existing licensing laws to sell tobacco products as well as enforcing any pertinent cap and winnow regulations. (SG 2016) Strategy 12 in this plan maps to the CDC's Component I. Community Interventions.

13. Strategy 13. Advertising and Social Media Tobacco Prevention and Treatment Campaigns.

Finally, strategy 13 is to use and sustain traditional media and social media campaigns to educate adolescents about the harms of nicotine use and de-normalize tobacco product use in the schools and community. Interventions that change social norms related to tobacco product use through hard-hitting media campaigns increase tobacco cessation by motivating tobacco users to quit. (CDC 2014; CTCP Ch. 3) Social media should include advocacy marketing campaigns to support the highest priority local actions as determined by the local assessment surveys (see Strategies 5,9,10) and as recommended by the Coordinating Center (see Strategy 11) and current science. Strategy 13 in this plan maps to the CDC's Component II. Mass-Reach Health Communication Interventions. Media outreach is well articulated in Dr. Steven Kelder's expert report, as are other strategies set forth above related to prevention. (See reports of Dr. David Cutler and Dr. Steven Kelder for costs associated with this Strategy)